THE VETERINARY RECORD

A Weekly Journal for the Profession.

Edited by WILLIAM HUNTING, F.R.C.V.S.

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THE FOLKESTONE CONGRESS.

Congress of the Royal Institute of Public will be held this year at Folkestone from st to July 27th inclusive. The sectional s commence every morning at 10.30 and interval for lunch are continued till 4 p.m. s, garden parties, and excursions supply a und of relief, and there is no reason why s, who have done their duty at a section, not make the Congress a healthy and inter- eek's holiday.

n C.—Comparative pathology, is the one most interests veterinarians, and July 25th h are the days when subjects of great interest ll be discussed. Papers are promised on :—

Collection and Transit of Milk.
erial Content of Milk.
inary Control of Dairy Herds.
ures for stamping out Glanders.
Cow in Relation to Public Health.
Necessity for Municipal Veterinary Inspection.
es and the Management with regard to Milk Supply.

ought to be enough to satiate the most veterinarian.

ny information write to the Hon. Sec., Mr. Lyne Dixson, M.R.C.V.S., Margate, who is l he can to make the section a success.

ave, as professional men, made insufficient these Congresses, where we meet medical d other experts, and are able to demonstrate re is a special field for our services.

EPIZOOTIC LYMPHANGITIS.

in W. A. Pallin, F.R.C.V.S., has just pub- Williams and Norgate) a very timely mono- n this new disease. The author has had nities of studying his subject in Japan, India, uth Africa. He has made good use of his nities and thus afforded the veterinary prac- of this country a means of recognising the when he meets it. The information afforded stworthy, and it is imparted in good clear . There is no index, but the work is divided tions, under headings, which make reference art easy.

disease is contagious and due to a crypto- which was discovered in 1873 by Rivolta. studied by Nocard, who in 1891 pointed out nostic importance of the organism which is ound in the pus. The disease prevails in India, and some other countries. It was taken to South Africa during the war, and sent to this country with the Army horses returned on peace being made. It has made its appearance at Aldershot, Woolwich, Leeds, Dublin, and the Curragh. A few cases have been detected in civil stables, but so far we believe only in horses cast from the Army. The incubative period may be anything from three weeks to twelve months. The mortality is 10 per cent., the duration indefinite—"under the most favourable circumstances the time required to effect a cure may vary from one month to six."

Prevention of spread is by no means easy if a case occurs in a large stable and is not at once isolated. We are advised that suspicious cases should be isolated, and diseased destroyed.

These facts demonstrate that epizootic lymphangitis is a much more serious disease than we at home had recognised. The slow and insidious manner in which it commences, its long period of incubation, its mortality, and its duration, constitute a danger which is not appreciated. The average horse is not worth a year's keep when we are not certain that a cure is then to be depended on. If the disease once escapes into private stables and gets a fair hold on a large stud we shall never clear the country again without restrictions and losses equal to those caused by glanders. Now that the disease is almost unknown outside of the Army stables there is every probability that we might stamp it out by proper restrictions. If nothing more is done by the State than is permitted by the present Order we have every probability of another horse plague being permanently installed. We have experience of the value of "isolation" in regard to farcy. It simply spread disease among the in-contact horses. If nothing thorough is done by the Board of Agriculture before epizootic lymphangitis reaches private studs we shall have another startling demonstration of their ineptitude.

The book is illustrated with a number of very fine photographic plates which show the disease in various parts of the body, and there is an appendix containing the Orders in force in England and Ireland.

Captain Pallin deserves the thanks of horse-owners and veterinarians for his little book, which should be ordered at once by all who wish to obtain the knowledge necessary to recognise and control this new disease.

The lectures in connection with the Brown Institution will be given at the University of London, S. Kensington, on June 30, and four following Thursdays, at 5 p.m., on The Etiology and Comparative Pathology of Chronic Nephritis and of Uræmia, by T. Gregor Brodie, M.D., B.Sc.

"Careful observation makes a skilful practitioner but his skill dies with him. By recording his observations he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of Pathological Science."

THE STAINING OF THE ORGANISM OF EPIZOOTIC LYMPHANGITIS.

Capt. Pallin, A.V.D., in the brochure he has just published on Epizootic Lymphangitis, mentions that I, using the Gram-Nicolle and Gram Weigert-Kühne methods, showed how easily the organisms could be stained, but he omits the very important fact that the methods I used were "modifications" of these well-known formulæ. My experience has shown me that the use of alcohol when decolourising is the cause of failure to reveal clearly the stained parasite and, consequently, I never use alcohol as a decolouriser when preparing a film of pus to show the organism. The method I find most satisfactory and of real value in demonstrating the saccharomyces is as follows:

The film is made in the usual way and fixed by heat or alcohol, the latter is preferable. Stain by hot carbol-fuchsin five minutes, wash in water, apply iodine solution (1 of I., 2 of K1, 200 of H_2 O.) for two minutes. Wash and dry with filter paper. Apply pure aniline oil until most of the fuchsin is removed from the film; it is better to occasionally examine under the microscope to see how decolorisation is progressing. If the aniline oil is allowed to act too long the organism may be decolorised or only appear as a red ring. I find that when the stain has disappeared from the 'ground' of the film, the action of the aniline oil may be stopped, and this is done by washing thoroughly in Xylol. After application of the Xylol the film may be allowed to dry, *i.e.*, the Xylol to evaporate. The film may be contrast stained, and preferably so. After the Xylol has evaporated the film should be dipped in water and a dilute solution of methylene blue in water allowed to run over the slide and to act for a minute or two. This is washed off and the slide dried in the air. It may now be mounted permanently in balsam. The result is that the organism, the saccharomyces, is stained garnet-red; other organisms, streptococci and staphylococci, etc., and the nuclei of the pus cells bright blue. Bismark brown as a contrast also gives good results.

This is the method we employ in the laboratory with good results and constant, and recently the students of my class prepared a specimen of pus from a case of epizootic lymphangitis with perfect success in every case.

A. E. METTAM.

COMPLETE FRACTURE OF THE SHA THE HUMERUS IN A FOAL

By R. PAINE, Government Veterinary S Cape Colony.

On September 28th, 1903, I was asked to a foal which had been kicked on the near sh

Upon examination the case proved to be complete transverse fracture of the humer way in the shaft of the bone, the leg hanging from the shoulder and swinging from side whenever the animal moved.

The patient was a great favourite, so tre was attempted; at first merely by the supp

tained with numerous layers of adhesive st from the front of the humerus to the side, quently a pitch charge was substituted.

Of course the case was handicapped owing impossibility to restrain movement by me slings. The subject, however, made up for t its age and by being extremely quiet. Gra more and more weight was placed upon th until by Nov. 12th the foal was walking and ing round the stable apparently quite sound.

Unfortunately I had a lot of work in the districts at that time and was unable to se photograph of the case then. The enclosed graph was taken on November 30th.

LETE LUXATION OF THE HIP JOINT IN THE COW.

subject (an old Friesland cow) was found n her stall, and unable to rise, the legs being ed in spreadeagle style on each side of her

paving in the cowshed being very slippery vet it was evident that she had injured herilst attempting to rise. The near hind leg normally mobile, and after an examination tum, the lesion suggesting itself was either a complete luxation of the hip joint, or a frac- the head of the femur. On account of the told him it was almost hopeless. The animal was first cast and made secure, then I made an incision through the skin and muscles about 15 inches in length, exposing and removing the whole of the food (which gave off a very offensive odour) and thoroughly washing out with an antiseptic. I next looked for the rupture in the œsophagus, which I found about four inches from entrance to thorax. It was three inches in length. I sutured the œsophagus and put eight sutures in, which thoroughly closed the wound, next the muscles with thirteen sutures, then the skin with fourteen, leaving room for drainage. I may say that it was not so easily done as said on paper, as the whole time occupied was three hours.

the patient treatment was not attempted. e post-mortem examination it was seen that scles and blood-vessels surrounding the hip d sustained severe injuries, that the hip- as completely luxated, rupture of the liga- n teres having occurred, with total destruction apsular ligament.

he snapshop enclosed the femur has been upon its axis in order that a cavity in the s beside the acetabulum may be seen (a ine points to this cavity), the head of the was deeply buried in this hole; the photo- also shows the ruptured end of the ligamen- res.

R. PAINE.

URE OF ŒSOPHAGUS IN HEIFER.

he 13th March I received a message to go e a heifer very ill with a swollen throat.

my arrival at the premises, I was told that rch 1st she had had a turnip in her throat, they had dislodged with a probang. I found imal frothing at mouth, back arched, coat , pulse 90, and in a very emaciated condi- n fact apparently dying. On examining the I found it to be swollen four or five inches rom the larynx to the chest, which pitted on re.

serted exploring needle but found no pus, so the skin and inserted my finger, then I told ner that the œsophagus had been ruptured e swelling consisted of food, thus the only hat could be done was to operate at once. he owner readily consented to, although I

Treatment.—Ordered all litter to be removed; and to be fed on old milk, gruel, and linseed.

March 15. Throat very much swollen, and a little discharge. Left an antiseptic to be injected thrice daily. So far the animal had not had anything to drink, but they had been horning it in, to which I objected.

March 18. Taken to drink milk, etc., swelling much less, with a profuse discharge. Same treatment continued, and I visited weekly until the 9th of May, when animal was completely recovered and put on to solid food and is doing well. No medicine was given.

T. WILKINSON, M.R.C.V.S.

Lanchester.

ABSTRACTS FROM FOREIGN JOURNALS.

ON THE PROPHYLAXIS OF PUERPERAL INFECTIONS. A paper read by Dr. STORCH, of Schmalkalden, District Veterinary Surgeon, before an assembly of Hessian veterinary surgeons at Kassel.

(Continued from page 822.)

If we would draw up rules for the prophylaxis of puerperal infection illnesses we must investigate the question: How come bacterial infections of the genital mucous membrane to arise? There must be the presence of pathogenic micro-organisms in the birth tract and a port of entrance for the germ of the illness in the tissue of the sexual organs. The port of entrance is furnished by wounds. These need not be of a severer nature than a tiny defect of the epithelium which almost always arises even after the easiest delivery accomplished without help.

By the injury to the epithelial layer the corresponding mucous membrane loses its protection against the invasion of micro-organisms. The latter in the great majority of cases arise in the genital passage in consequence of lack of cleanliness on the part of the accoucheur. Of course all puerperal infections cannot be put down to the accoucheur, for they often occur from the stall and the bed. On account of the fact that many puerperal illnesses

arise as enzootics, and can only be exterminated by thorough disinfection of the stall and removal of the pregnant animals, these measures have been vigorously carried out in recent years.

Of numerous reports on the subject I will only mention the following: Weisner saw in 1891 quite 30 cows ill after parturition with metritis, chiefly of a diphtheritic nature. Similarly Horn, of Griesbach, in the same year noticed a like illness on very clean farm premises. Steuert in 1891 saw a series of cases of metritis septica occurring as an enzootic. Interesting also is the communication of Haubold in the veterinary report of Saxony for 1900. In a group of 75 cows diphtheritic metritis arose followed by abortion in 30 to 35 animals. The evil was checked by removing the pregnant animals to another farm and keeping them there until 14 days after calving.

In the rank of puerperal illnesses occurring as enzootics, whose transmission may be ascribed to the floor of the stall, may be placed the gangrene of the vulva noticed by me in one place in the year 1898. The carrier of the infection in this case was the cowman, who officiated as accoucheur, but in one case the infection was due to the floor of the stall, and one cow died as related. I recommended pulling up the rubble stone paving, draining of the superficial stratum and new paving. The owner, however, ignored all this, and a cow far gone in calf was brought on the place. When she calved in the course of a month she became affected with gangrene without the cowman coming near the place after the death of the first cow.

What a *rôle* stall and bed play in the spread of necrotic inflammations of the vagina and uterus is shown by the discourse delivered by Imminger in 1898 to an assembly of naturalists, and by the publications of Ellinger in the *B.T.W.* Imminger noticed that in stalls where inflammation, ulcer, and abscess of the claws has occurred, very often where there is the slightest injury of the genital mucous membrane and the easiest birth, necrotic inflammations of the uterus and vagina arise which in a short time end fatally.

Ellinger mentions two estates where necrosis of the vagina and panaritium raged as enzootics at the same time. Whilst the ubiquitous bacillus of necrosis, which is regularly present in cattle sheds is under general conditions a harmless saprophyte, yet in special circumstances about which we do not yet possess sufficient knowledge, it may occasion enzootic affections of high virulence.

Whether the bacillus of necrosis, to exert its deleterious effects, requires the presence of other bacilli favouring its growth and spread, which prepare the port of infection for it, is a matter about which we know too little.

An interesting case of necrotic metro-vaginitis occurring at the same time as panaritium was noticed by me last year. In a clean stall with concrete flooring, in which panaritium had never occurred, I had a cow that had been ill for three days after calving with extending necrosis of the vaginal and uterine mucous membrane. Daily infusions with disinfectants caused a copious fluid exudate of shreds of diphtheritic mucosa to be w away. The wet straw behind the cow was away each time and every cleanliness ob After about eight days treatment the anim came affected with severe panaritium of the hind foot, In spite of unremitting attentio suitable treatment the cow died.—Ex. *B Thierärzt Woch.*

G.

(*To be continued*).

THE USE OF OXYGEN FOR MILK FE

By Richard P. Lyman, Hartford, Connecti

So thoroughly satisfied have I been with the obtained with oxygen as a treatment for milk fev I have for some time intended to offer the results experience to the *Review* for publication.

Only a few days ago I received a call to visit, as possible, a cow even then unconscious with universally described as milk fever. On arriving a well-bred Jersey cow lying flat upon her left sid stretched out, entire loss of consciousness, temp 102·4 and respiration already irregular and gaspi mouth opening at each respiration.

Concluding that energetic measures were imp I injected hypodermically into the cellular tissue neck ½gr. of strychnine after I had instructed an as to strip the udder. This done I hastily inflate quarter with oxygen, emptied the bladder and bowels, injecting into the latter a quantity of warm water, and then waited for results. The effects oxygen began to be noticeable inside of ten minu profuse lacrymation and signs of returning consci the latter was complete twenty minutes after th tion had been started. The animal becoming now what restless, finally swung her head to the fron in thirty-five minutes from the injection was re naturally, with head erect. Just one hour and fi minutes from the injection the cow got up and ap perfectly normal. I record this case in detail it has been the general result with all the cases w partner and myself) have administered oxygen t numbering 24, but the results were much more and the case was far and away more serious than have thus far seen saved by any treatment wh It may be well right here to remark that I have fo time been inclined to believe that the more ac and severe the attack, the quicker has been the re both of the oxygen and strychnine that has been istered. Also, that a cow approaching death w stand as stiff a dose of strychnine as one less serio

Early in March of last year, Dr. Kunsel, a veterinary surgeon, of Lucerne, published a rep the value of oxygen as a cure of this disease. Al the inspiration for this article lies in the results gen as a treatment for milk fever on the theory t disease is due to an anærobic organism, the writer persuade himself that the latter is the true caus though he acknowledges the treatment as a spec gives credit to Dr. Kunsel for his discovery. T that almost universally, to all appearances, th healthy cow succumbs, while a weak and sickly escapes; that many animals in the same herd ca do not have the disease; that it appears at most in intervals; that it rarely occurs except after part and this is seldom followed by disinfection; that strains or families are more subject to it than and other facts of similar nature tend to dispro belief. Furthermore, thus far no inoculation ments have been reported to substantiate the sam

Mode of Administration and Results.—Supplied with an assistant, a tank of oxygen which is under considerable pressure (I prefer the small tank containing 90 gallons compressed to about 5 or 6 gallons) and a piece of rubber tubing about six feet in length, one end of which is securely wired to a milking tube, while the other end is similarly attached to the detachable nozzle of the tank, likewise a hypodermic syringe and strychnine solution, a catheter, injection pump and a one-inch cotton bandage, the method of treatment is as follows:

As soon as convenient on reaching a case I inject hypodermically from ⅓ to ½ grain of strychnine in solution into the neck, and instruct the helper to thoroughly strip out the udder. I then see that the latter is well washed off, that no dirt or infection will be allowed to enter with the syphon. With the rubber tubing screwed on to the tank, insert the milking tube into one of the upper teats and allow the gas to flow slowly until the quarter is quite hard and full. Instructing the assistant to hold the end of the teat firmly between the thumb and forefinger, the tube is withdrawn and a piece of the bandage is tied tightly around the teat as low down as possible, to prevent the escape of the gas. Following this procedure in all four quarters, the treatment is supplemented by light massage to the udder, catheterizing the cow, and after emptying the lower bowels, injecting a large quantity of warm soapy water; likewise build her up with bags filled with litter that she may rest comfortably upon the sternum.

Should it be necessary to repeat the treatment this may be done in six hours. The ligation should be removed from the teat in about an hour and a half to prevent the circulation being interfered with, but may, if necessary, be reapplied after the teat has been held a few moments between the fingers. A repetition is seldom necessary, the animal, if unconscious, soon becomes rational, acts improved, has profuse lacrymation and, on an average regains her feet and normal inside functions of five hours. I have never seen a bad result to the udder and only once have I been forced to give a later tonic treatment for loss of appetite.

By Dr. S. S. Snyder, Cedarburg, Wisconsin.*

Having had considerable bad luck with the iodide of potassium treatment in parturient apoplexy, and after reading the success Drs. Tennant and Barnes, of London, Ontario, had with the oxygen treatment, I thought I would try it. At Milwaukee I found a cylinder containing forty gallons of pure oxygen. I attached my hose and tube which I used to use in giving iodide of potassium. It worked fine, but I had nothing with which to measure the oxygen, so I had to guess at it.

No. 1.—On October 7, I was called to see a grade Holstein cow having calved about 24 hours; down and unable to get up. Semi-comatose. Saw her about 6.30 p.m. Injected oxygen; in three and one-half hours she was on her feet. Saw her next morning. She was eating as if there had been nothing wrong with her. Same cow had milk fever one year before, when it took about 14 hours to get her on her feet with the iodide of potassium treatment.

No. 2.—October 10. Full-blood Guernsey cow, calved about 30 hours; down and unable to get up. Saw her about 5 p.m. Injected oxygen; in four hours she was on her feet. In this case I had some trouble to get her bowels to move.

No. 3.—October 14. Grade Guernsey cow, calved about 24 hours; down and unable to rise. Semi-comatose. Saw her about 1.30 p.m. injected oxygen; in one hour after she was on her feet, and made good recovery.

No. 4.—October 19. Grade Durham, 10 years old, calved about 24 hours before she went down. Was called about six hours after she went down. At 12.30 p.m. injected oxygen, filled the udder quite full, closed up the teats so that the gas could not escape. Gave another injection next morning as she was still in the same condition. She died about 12 m. same day. The oxygen seemed to have no effect on her.

No. 5.—October 21. Grade Durham cow, had calved about 24 hours before noticing her sick, which was some time in the forenoon. She went down at noon, unable to rise. I was called about 8 p.m., filled her udder well with oxygen. Called to see her next morning; found her up and looking for something to eat. She had gotten up during the night. The owner did not know at what time as he did not stay with her.

No. 6.—November 2. Grade Durham cow, calved about 20 hours before she went down, unable to rise. Had been down since noon. Saw her in the evening. Injected oxygen about 8 p.m. Saw her next morning; found her up and doing well.

No. 7.—November 3. Grade Guernsey, had calved about 18 hours when owner noticed she was not well. This was the evening of the 2nd. I was called next day; got there about noon, gave her an injection. She got up same afternoon and made a good recovery.

No. 8.—November 17. Grade Durham, had calved about 24 hours when she went down, unable to rise. This was in the morning. Saw her in the afternoon about 4 p.m.; injected oxygen. At 8 p.m. she was on her feet, made good recovery.

No. 9.—November 17. Grade Durham cow, had calved about 12 hours before she went down, unable to get up. Comatose. At 10 p.m. gave injection of oxygen. She got on to her feet next morning at 5 a.m.

At the time I had the last two the weather was very cold. The last one was in a very cold stable.

American Veterinary Review.

*Read at the meeting of the Society of Veterinary Graduates at Wisconsin, Feb. 4th.

THE VETERINARY MEDICAL ASSOCIATION OF IRELAND.

(Concluded from p. 828.)

ABDOMINAL SURGERY IN THE SMALLER DOMESTICATED ANIMALS.

By Prof. G. H. Wooldridge, Royal Veterinary College of Ireland.

Mr. President and Gentlemen,—The subject I am bringing before your notice this evening is one of growing importance on account of the rapid strides that have been made in this branch of our art and science. By this I do not wish to suggest that any of these operations are new, but that the percentage with successful results has considerably increased within the last decade, and consequently we are much more often called upon to perform these operations than formerly. The title "Abdominal Surgery," embraces a very wide scope, much too wide to be considered in detail in the time at our disposal with reference to all of the operations we may be called upon to conduct, so I must ask to be forgiven if I omit any special operation that may suggest itself to any of you and confine myself to the common ones. Until recently abdominal section was seldom performed except by the so-called "specialist," but in these days every practitioner must be ready and able to operate with reasonable prospects of success.

Before proceeding to operate on any animal it is wise, when circumstances permit, to "prepare" the patient. The preparation should consist of attention particularly

to the diet and to the state of the alimentary tract. It is often advisable to give a laxative 24 to 36 hours before operating, a light, easily digested, and restricted diet, light exercise, and about two hours before operating a small warm enema. Food should not be given within two or three hours before operating in order to diminish the risks of vomiting during anæsthesia, but fortunately this untoward incident does not occur so frequently in our patients as in the human subject. All instruments that may be required, dressing and suture materials, and disinfectants should be got ready in good time to prevent a rush just before operating. Instruments should be boiled immediately before using, and suture material and cotton wool for sponging should be similarly treated. Disinfectant for instruments in tray should consist of a four or five per cent. solution of carbolic acid, and a warm solution of chinosol should be provided in another vessel for sponging. I have a great objection to using carbolic acid for wounds in dogs and cats on account of its great toxic properties for those animals. Chinosol 1-500 or 1-1000 I much prefer. It cannot be used for instruments as it turns them black and takes the edges off knives and scissors. Instruments having once been prepared should not be touched by anybody other than the operator or his assistant, both of whom must have previously thoroughly cleansed their hands. Plenty of other disinfectants may be found useful instead of the above, but those are what I personally rely upon. Common sponges should be studiously avoided. Use cotton wool which should be discarded on becoming soiled.

Choice of anæsthetic.—On the grounds of humanity, and also in many cases for general convenience, an anæsthetic of some kind should be administered. There are several to choose from, and the choice must depend on the patient and the nature of the operation. Of general anæsthetics, chloroform is the best for dogs in good condition other than small pet dogs. For the latter, and for fat subjects, A.C.E. mixture is usually quite safe, while for cats either A.C.E. mixture or ether is generally safe. The method introduced by Hobday stands by itself for safety in producing general anæsthesia by inhalation. The principle consists in the "drawing of air over the agent" chloroform or ether etc. and passing it on to the muzzle in a constant stream and highly diluted In big dogs it is sometimes necessary to put a little chloroform on cotton wool and insert it in the mouth of the mask. I think the best way to give chloroform to large dogs is by the wire muzzle and towel in a single fold and the drop bottle. The anæsthetic should be given first with the patient in the prone position, and if necessary the animal turned over when under its influence. Before administering a general anæsthetic antidotes should always be had in readiness, the best being hydrocyanic acid, a full medicinal dose administered by means of a drop tube to the back of the tongue. For smaller operations on the abdominal wall such as the excision of tumours, local anæsthetics may be used instead of general ones. Cocaine and eucaine are probably the best. The former acts the quicker, but the effects of the latter are more persistent. They may be used conjointly with advantage, combining the good effects of both. For a dog two grains of either, or of a mixture of equal parts, should be regarded as a maximum dose, dissolved in from 40 to 50 m.m. of boiled water (5-4 per cent.) and injected subcutaneously at several points above the seat of operation.

Preparation of the site.—The area for a few inches around the actual seat of incision should be first clipped, and washed, and then shaved and disinfected. The cleansing process is more thoroughly accomplished by the use of ether after soap, and finally rubbing well with either carbolic acid or chinosol solution.

Paracentesis Abdominis.

This is perhaps the simplest abdominal operation, and is practised for the relief of ascites or dropsy of the peritoneum. The best place for puncturing is on the middle line between the umbilicus and pelvic brim. The spot is denuded of hair and disinfected, and a small sterile trochar and canula taken. This is inserted first a little way under the skin and then turned inwards to the abdominal cavity. The object of doing it this way is that the holes through the skin and abdominal muscles do not coincide on the removal of the instrument, a kind of valve being produced. If the liquid does not flow very readily, pressure may be exerted by means of a bandage round the abdomen and tightened by both ends. It is quite unnecessary to leave a tight bandage round the body after the withdrawal of liquid, as used to be recommended by the old practitioners with a view to avoiding collapse from the sudden relief of abdominal pressure.

Puncta Vesicæ.

The bladder is punctured in cases of retention of urine in small animals where there is a difficulty in passing the catheter. A distended bladder is easily felt through the abdominal wall. It should be firmly grasped immediately in front of the pubis to prevent it running before the instrument into the pelvis. A very small trochar and canula should be used, and the puncture made as in paracentesis abdominis in a backward direction. I have never seen any ill effects after this operation when ordinary precautions have been taken.

Mammary Tumours.

These may occur in bitches and cats, and are rather common. Their nature is generally either fibrous or cartilaginous with small osseous centres revealed on attempting to cut them. Occasionally they are adenomatous, and rarely carcinomatous. The size varies, and not infrequently assumes large proportions, and with stretching of the skin causes ulceration. This ulceration extends by the patient licking it, and often results in inoculating pyogenic organisms which may bring about suppurating foci in the new growth. The only treatment for these parasites (if I may so call them) is excision, and the operation is not usually a difficult one. An elliptical incision is made over the tumour, including the ulcerated parts in the portion of the skin to be removed. A piece of ligature material is then passed through the growth in order that an assistant may raise it or otherwise manipulate it without either soiling the wound or getting in the way of the operator. Cutaneous hæmorrhage must be arrested by artery forceps and careful dissection of the tumour proceeded with. Blood vessels must be looked for in dissection and ligatured before cutting. If the growth is pedunculated there is usually only one vessel of importance to ligature, but if the base of the tumour is diffuse, there may be several vessels requiring ligation. It is advisable not to use the direct cutting edge of the scalpel but to more or less break down the connective tissue by drawing the knife obliquely across the fibres. On detaching the tumour, irrigate the wound and saturate it with the chinosol solution, and proceed to suture it with simple interrupted sutures. If the cavity is large it is a good plan to stitch in a plug of cotton wool soaked in chinosol. This maintains an antiseptic in contact with the wound and also diminishes the risk of hæmorrhage afterwards from the possible slipping of a ligature. Remove the plug next day and some of the sutures, and irrigate the wound daily, protecting it by special bandage from the admission of dirt. The healing of the wound is generally somewhat protracted in these cases where ulceration of the skin over the tumour existed to any considerable extent.

Reduction of Herniæ.

The common herniæ with which we have to deal are either umbilical, ventral, scrotal, or inguinal. The herniated part may be omentum or intestine, or uterus, in inguinal hernia of bitches. Sometimes the latter is bi-lateral, each sac containing one uterine horn, either alone or along with parts of other organs, *e.g.* bladder, bowel, etc. Pregnancy or otherwise exerts little or no influence on the occurrence of inguinal hernia of uterus, and it may occur during pregnancy or in virgin bitches. On simple inspection without manipulation either of the herniæ may be taken for tumours or abscesses, and this must be avoided by careful examination, which is not always as easy as would seem. The principles of operation in the various herniæ are identical, and consist of the replacing of the contents of the sac, and the adoption of means to prevent recurrence. The animal and seat of operation being prepared, the middle line of the swelling is to be noted, and then if possible the herniated part replaced through the orifice. Next incise the skin along the line previously noted, but take care to avoid if possible cutting the peritoneum, which generally constitutes the innermost layer of the wall of the sac. Dissect this from the external layers, and either return it to the abdomen, or ligature it close to the abdominal wall, cut off the end and return the remainder. The ligature is to bring the serous surfaces in contact for adhesion. If the hernia be one of the so-called irreducible ones, the condition being caused by adhesions to the walls of the sac, those adhesions must be carefully dissected or broken down and the part replaced. If the difficulty of reduction be due to the large size of the herniated organ compared with the orifice through which it has passed, the latter must be enlarged cautiously to permit the return of the organs. If omentum be the cause of the trouble one need not scruple to remove the offending portion. The edges of the orifice should next be scarified with a view to setting up granulating edges, and then sutured with prepared catgut or silkwormgut rather than silk, on account of its giving support for a much longer period than silk. In some cases the silkwormgut sutures never become absorbed as is the case with silk and cutgut. Close the external wound with close interrupted silk sutures, and if the wound can be thoroughly dried apply over them a good layer of freshly prepared iodoform in flexible collodion (1-8 or 10). If support is deemed advisable it may be afforded by plaster strappings or a bandage, but these measures are not often necessary if the sutures are put in close together. The skin sutures need not be touched for three days unless there are signs of weeping from the wound or a tendency on the part of the patient to scratch, which latter usually indicate slight sepsis. The buried sutures need not be disturbed, and the whole will heal by first intention if asepsis has been attained. Scrotal and inguinal hernia call for special mention. The former usually recurs unless castration is performed, in which case the inguinal canal naturally closes as a sequence. Another way out of the difficulty is suggested by Mr. Gray, viz., to perform laparotomy and suture the offending part to the peritoneum after reducing the hernia, the same principle which he adopts in cases of recurrent prolapsus recti[1].

In inguinal hernia an important difficulty presents itself if the offending uterine horn is pregnant, as in a case cited by Prof. Hobday. Then either cæsarean section or amputation of the horn must be performed. In Prof. Hobday's case he took the latter step "the animal suffering so little disturbance that she gave birth to a puppy in the ordinary way 17 days later."[2]

(1) "Canine and Feline Surgery." Chapter xiii, p. 112.
(2) Idem, p. 109.

Laparotomy.

This operation consists simply of opening into the abdominal cavity, and is done either to assist diagnosis or as the first step in more serious operations. In the former case it may be useful when a dog is suspected of swallowing some foreign body which ordinary means have failed to remove, or in suspected cystic calculus. The incision may be made either in the middle line of the abdominal wall or in the flank, and of the two I prefer the former, as there is usually so little hæmorrhage from the "linea alba" and both sides of the abdominal cavity are easily accessible. The extent and exact position of the incision depend on the object of the operation. For diagnostic purposes it is probably best immediately behind the umbilicus and is seldom required larger than two inches. The skin is first incised, cutaneous hæmorrhage being easily controlled by Spencer Wells' artery forceps. Next a very small puncture should be made with the point of a sharp scalpel, and a grooved director inserted into the peritoneal cavity in the direction of the operation skin wound. The tendinous "linea alba" and parietal peritoneum are then cut together along the track of the director with the point of a scalpel having its cutting edge outwards. Needless to say the use of the director is essential to prevent wounding the organs.

In examining abdominal viscera it may be necessary to take organs out of the cavity to do so properly. In that case care must be taken not to permit them to become in any way soiled by contact with non-sterile skin, with operating table, or with assistant's hands. The organs can be held up by an instrument for the purpose by the attendant whose hands have been suitably prepared. The examination completed, either further operation is proceeded with or the organs are returned and the cavity mopped out with chinosol solution, the sponge being secured by Spencer Wells' artery forceps and the abdominal wall closed. In doing the latter it is customary in the human subject first to suture the peritoneal coat independently of the more external coats, but in our patients that step appears unnecessary. The muscular and peritoneal coats are together sutured by close simple interrupted sutures of catgut or silkworm gut, the lips of the wound being constantly dabbed with chinosol during the process. The skin is next sutured with close silk sutures, the reef knots being to the side of the wound. The part is then to be rubbed with antiseptic sponge and dried with dry wool and hermetically sealed with a layer of solution of iodoform in collodion in the strength of 1 to 10. Orthoform may be advantageously substituted for iodoform for cats, on account of the latter occasionally causing vomition in those animals. If the part has been thoroughly dried the sealing of the collodion is effectual, and no bandaging or further support is necessary generally, but if in the opinion of the operator further support should be deemed advisable, it may be afforded by adhesion strappings. Mr. Lockwood, the eminent surgeon of St. Bart's Hospital, has given up using "made-up" solutions of iodoform and collodion, and uses them separately, applying a thin layer of collodion and dusting iodoform over it while drying. His objection to the made-up preparation is that "after a while they develop pungent acrid vapours which are most irritating."[3] I have also found old solutions objectionable, and have seen dermatitis affecting the whole area over which the solution was applied. In one instance the vapour was most irritant to my eyes, and since that occasion I have followed Mr. Lockwood in applying the collodion first, and dusting the iodoform over it when drying. If the operation has been performed with successful sterile precautions the wound will not require to be interfered with for several days. If,

(3) "Aseptic Surgery." Chapter xiv, p. 145.

however, such is not the case, slight weeping may be noticed in one or other of the suture tracks, under the collodion, in a day or two. Then several or perhaps all the skin sutures require to be removed and the cavity thoroughly irrigated with a suitable disinfectant, and support given by bandages or strappings. It is quite unnecessary to interfere in favourable cases with the deep sutures, as they become absorbed eventually if catgut or silk, giving support until then. I have felt buried silkworm gut sutures in the abdominal wall of a cat two years after spaying, and apparently causing no inconvenience.

Dogs after laparotomy should be carefully watched for some time to see that they do not jump down off chairs, tables, etc.

To show the efficacy of the sealing of the wound by collodion, I may cite a case that occurred in the London College some few years ago. A Dalmatian dog was the subject of persistent vomiting, and an exploratory laparotomy was performed, and on a search for foreign bodies proving fruitless the abdominal wall was closed by sutures and sealed with collodion and iodoform. Later in the day the dog escaped from the premises and ran off towards Oxford Street, where he was lost sight of by a pursuing student. Three days later he was reclaimed from the Dogs Home at Battersea. No attention had been paid to the wound in the meantime, and in spite of it all the wound healed without any unfavourable incident just as nicely as though nothing unusual had happened.

Oophorectomy, Ovariotomy.

The former term is applied to the removal of healthy ovaries, and the latter to the excision of diseased ovaries; otherwise the operations are identical. If the object of the operation is simply to prevent pregnancy, six to eight months is a convenient time for bitches, and a month or two earlier for cats, and it is better that they should not be in œstrum. One would naturally expect that this operation would prevent recurring œstrum, but that is not always the case. An instance to the contrary was brought to my notice in case of a small fox-terrier bitch that had been lined by a retriever and had ovaro-hysterectomy performed as it was deeemed inadvisable to risk parturition. She not only came into œstrum again, but actually took the dog again. [Since writing the above, I have been informed that a pug bitch whose ovaries and pregnant uterus I removed last December (she had been lined by a collie) came again into œstrum last April and was found locked with a dog. Is it possible that a very small portion of ovarian tissue may have been left in both of these cases to be responsible for the recurring œstrum ?]

The operation is commenced as described under laparotomy, the incision being immediately behind the umbilicus. The second finger is inserted into the peritoneal sac and passed close to the abdominal wall laterally when it comes into contact with the uterine horn of that side and the cornu is hooked up with the finger. Trace the womb up to the ovary which should be ligatured above and below, and detached by means of the scissors. The other side may either be secured in a similar way or traced from the cornu already secured by way of the body of the womb. The operation is then completed by mopping out the peritoneum with a suitable antiseptic, and closing the wound as previously described.

Hysterectomy and Ovaro-Hysterectomy.

For this purpose, the operation wound is required a little more posterior than for the previously described operation. In hysterectomy the uterus only is removed, and in ovaro-hysterectomy the ovaries and womb are removed together. Commencing as before, two ligatures are placed above or below each ovary, according to whether they are to be removed or not, and cut between. Two ligatures are next placed on the body of the womb, and the latter removed by cutting between them. On the part of the womb remaining, the best form of ligature to apply is the Staffordshire knot, as it is less

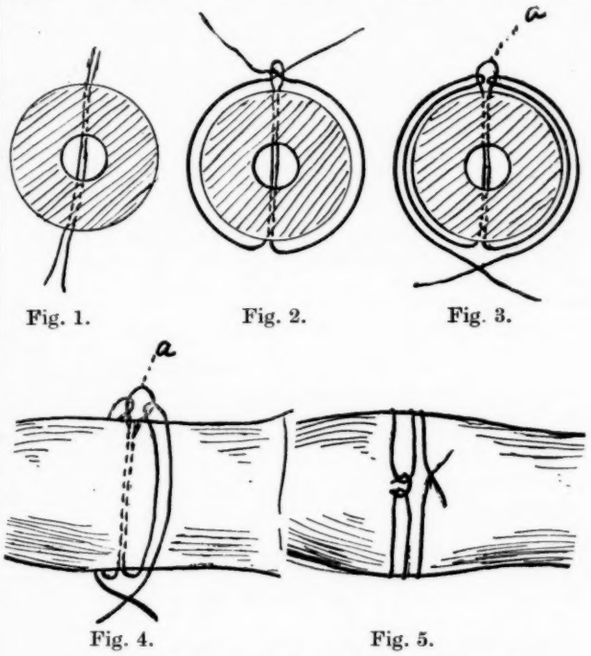

Fig. 1. Fig. 2. Fig. 3.

Fig. 4. Fig. 5.

Method of tying a "Staffordshire knot" ligature.

1. Transverse section. Double silk through the middle of the uterine body. 2. Do. ends passed round body and through the loop, and as in Fig. 3, back again on the same side to be tied below. 4. The same stage as in Fig. 3 but seen from the side. (In Figs. 3 and 4 the loop *a* is exaggerated. It should be drawn down to the level of the body after the ends are passed through.) 5. The double ligature completed as seen from above.—G.H.W.

likely to slip off. It is put on as follows: take your sterile ligature material, silk for preference, double it in the middle, and thread the double end through the eye of a straight needle. Then pass it through the middle of the body of the uterus and remove the needle. You now have a loop of silk at one side and two ends at the other. Pass the ends round one on each side of the womb and through the loop, which is then drawn down to the outside of the uterine wall. The ends are now tightened and each is passed back again round the same side of the womb as it was originally passed and the two tied. Then the ends may again be tied round the outside. By this means the body is twice ligatured, once in section and once as a whole, and the ligature is unable to slip off. Before severing the womb it is advisable to insert a layer of antiseptic wool below the seat of incision, to catch any discharge that may escape from the lumen of the uterine body, and which would otherwise soil the peritoneal cavity. After removing the womb, the "stump" must be well disinfected, the peritoneum mopped and the wall closed as in the previous operations. The chief difficulties that present themselves are in cases where parturition has commenced. Then there is the likelihood of fœtal membranes becoming implicated or imprisoned by the ligatures. To avoid this the membranes are manipulated per vaginam, returned into the womb and maintained there mechanically until the upper womb ligature is about to be tightened; the lower ligature, *i.e.*, the one to remain on the stump, is then almost sure to be free from the fœtal membranes. Again, in all cases where the operation is performed

after parturition has commenced the uterus should be first irrigated with an antiseptic, and especially so if a dead fœtus is suspected.

"Cæsarean Section" or Hysterotomy.

This operation consists in the opening of the uterus and the removal of its contents. It does not meet with quite the same amount of success as hysterectomy. The gravid womb is exposed as in the previous operation, withdrawn from the abdomen and supported by a large warm pad of cotton wool that was boiled with the instruments. The uterine wall is then inci-ed at the point that appears least vascular, and the contents, fœtus or fœtuses and membranes, removed. If possible all the uterine contents should be extracted through the one opening, but often in multiparity more incisions are necessary. After their removal, the womb is mopped out with an antiseptic and the incision closed with two or three rows of sutures; the first row may be through all the coats of the uterine wall, and the second and third only through the peritoneal and muscular coats, the former row being thus in-turned and two layers of peritoneum brought into apposition (Lembert's sutures). The abdomen is then closed as previously described.

Lithotomy.

In cases of large bladder calculi in the smaller animals this operation has to be performed through the abdominal wall. The site of the external wound in the female is on the middle line immediately in front of the brim of the pelvis, and in the male a little to one side of the penis. The abdomen being opened, the bladder is raised and rested on a warm boiled cotton-wool pad. It is then incised on the middle line, if possible on its upper surface, and the calculus removed. If the stone be attached to the mucous membrane, the adhesion should be carefully broken down with as little destruction of tissue as possible. The calculus being removed and the bladder mopped out, the wound in the latter is to be closed. Unless there is reason to suspect a septic condition of the bladder there is no necessity for Lembert's sutures; close, simple, interrupted sutures piercing the whole of the wall with in-turned edges being sufficient. The operation is then completed by closing the external wound with due precautions.

Gastrotomy.

This operation is performed for the removal of foreign bodies such as corks, stones, etc. These are generally suspected by such symptoms as persistent vomiting. In some cases the foreign body may be felt through the abdominal wall. If ulceration of the stomach could be definitely diagnosed, the radical operation of excision of an elliptical piece of the stomach wall would be indicated. Laparotomy is first performed and the stomach raised from the cavity as far as possible and packed round with antiseptic absorbent wool. The incision is then made through the gastric wall in that place where blood vessels appear least numerous. The incision is generally only required small. It is surprising through what small incisions comparatively large bodies can be extracted. Great care must now be taken to avoid soiling the peritoneum. If the stomach appeared in any degree tympanitic, it would be advisable to first puncture it with the trocar and cannula before using the knife. The stomach opened, the body to be removed should be grasped firmly with forceps and extracted. Take care not to touch the object with the hands, and be sure to put it and the forceps away in order not to contaminate any of the other instruments. The stomach must next be closed with two or three rows of sutures, the first being through the whole of the structures of the wall and very close, and the second and third being Lembert sutures, taking in only peritoneum and muscular layer, and completely hiding the previous row of sutures. This should effectually prevent matter passing from the stomach to the peritoneal sac and setting up peritonitis. The abdominal wall is then closed as in the previously described cases.

Enterotomy.

This operation of opening into the intestines is performed for the removal of obstruction, as foreign bodies, etc. The abdomen is opened as before, and the intestines exposed. The position of the obstruction is found and examined, and above and below it are placed bowel clamps to prevent ingesta passing through the operation wound by peristalsis, either forward or backward. If the bowel wall at the seat of obstruction is badly congested or inflamed, an attempt should be made to move the offending body along to a healthy spot, which would be more favourable for operation. The bowel should be packed round with antiseptic material to diminish the chances of contamination of the peritoneum during the process. The site of operation determined, the intestinal wall is then incised longitudinally and the obstruction removed with forceps. The wound is then closed with Lembert's sutures. Only one row of sutures is obviously permissible, so great care must be taken with them, seeing that they are close and not piercing the mucous membrane. The part is then thoroughly disinfected, the clamps and pad removed and the abdominal wall closed as in laparotomy.

The after treatment in these two last operations consists of the withholding of solid food for four or five days, giving milk or beef tea, and after that finely minced fish, or scraped lean of meat for several days, and afterwards a nutritious but sparing diet for a week or two. The wound of course is treated as described under "Laparotomy."

Caponing.

I was in considerable doubt whether or not to introduce this operation into the present paper, but I decided that it would not be out of place, although it is much less frequently performed than it used to be. It consists of the castration of cockerels, and its object is to allow the birds to be fattened much more quickly than they otherwise would. Capons, too, when fully grown are larger than ordinary cockerels, have a finer flavour and are of considerably greater value as a marketable commodity. Thus, from a poultry rearer's point of view it is a very profitable operation. The seat of operation is between the last two ribs and may be either unilateral or bilateral. I think the latter is much to be preferred, being easier, and the extra wound seems to cause no extra inconvenience. The bird is first prepared by withholding food for from 24 to 48 hours before operating, allowing only water. He is then secured by tying his legs together and attaching a weighted cord to them. The wings are similarly secured, fully extended, and tied together over the back and weighted. The weights are allowed to hang over the opposite sides of a narrow table and the bird is then helpless. The two last ribs are next located, and the feathers for an inch in front and behind removed. If the remaining feathers in the neighbourhood are moistened they will lie flat, and so be less likely to get in the way during the process. Ordinary attention to cleanliness is all that is necessary, and no disinfectants are required. The incision is made just in front of the last rib for about 1½ inches in length, and by means of a speculum for the purpose the two ribs are separated allowing one to look into the body cavity. The hæmorrhage here is so slight as to require no attention. On looking into the cavity the testicle should be seen as a cream-coloured ovoid body with a few blood capillaries on the surface. It is seen through a transparent piece of mesentery which is often called the "striffen" and this has to be cut next, revealing the testis,

which in the young bird would be rather less than a hazel nut in size. The gland is then grasped by special forceps and removed by torsion. If the bird is more than three months old the testis may be twice the size of a hazel nut and is then difficult to grasp with the instrument provided for the purpose and is very liable to break down in the process of removal, which has to be done piecemeal. (About two months old is a convenient age for operation, before the cockerel has begun to crow). The edges of the wound may then be brought together by a single suture, but even that is not essential. The same process is repeated on the other side, and the bird put away in a clean cage. The chief danger to be guarded against is puncture of the posterior vena cava in the roof of the body cavity. The wounds heal with remarkable rapidity, and usually require no after-treatment.

DISCUSSION.

Mr. DALY considered they had been favoured with a very interesting paper, and as he was sure the members present had a good many remarks to make on the subject he would not detain them. The only operation he had much experience of in the case of small animals was caponing, and he found no difficulty in performing it from the one side. He used two bottles as weights to hang on each side of the fowl—two pint bottles filled with water. After the operation he simply let the bird walk away. He might say indeed that the first case he took up was not altogether the success he hoped for, he got very near the *vena cava*, and the result was the "pot." But after doing a few of them there was not much difficulty.

Mr. MAGEE said he would like to add to the Chairman's remarks as regarded the value of Prof. Wooldridge's paper. He, however, thought there was one omission in it, that was that no reference had been made to the examination of the animal's heart before the operation. In the case of the large animals at all events this was a very important matter, and he thought it might often prove of value in the case of the smaller ones too. He could also testify to the good results obtained by preserving asepsis of wounds, or where that was impossible, by resorting to the free use of antiseptics in the case of parts already septic. He had heard practitioners say that antiseptics were often overdone. He did not think that that was so, but in any case it would be better to overdo the thing than underdo it. He remembered reading a paper by Prof. Hobday in which he said that if asepsis was preserved the animals did not interfere with the wounds afterwards. He (Mr. Magee) had found that to be true. The last time he met Prof. Hobday he was speaking to him about the after treatment of dogs regarding their bedding, and he (Prof. Hobday) said that a very good thing sometimes, depending on the nature and position of the wound, was to allow dogs and cats to lie on the clean boards and to have no bedding at all, provided of course the temperature of the kennel was kept high enough. As regards caponing, he had provided Prof. Wooldridge lately with some cockerels and they had operated with good results. They found that the birds put on flesh very fast as the result of removing the testes and giving them as much as they could eat. In France the fattening of capons is an extensive and successful industry, and he believed the Department of Agriculture in Ireland was endeavouring to encourage it through the country.

Prof. CRAIG could only agree with the reader of the paper on most of the conclusions he had arrived at, and any remarks he had to make were mostly in confirmation of them. First of all as regards anæsthesia in the lower animals, especially dogs and cats, Prof. Wooldridge had mentioned the various agents employed, and described the methods used to administer them. He advised cocaine and eucaine in the smaller operations, such as removal of the mammary glands. It had been objected, however, that these very often set up toxic symptoms. Well, he had seen cocaine used and had used it himself very frequently, and only on two occasions, he thought, had any untoward symptoms been noticed. Where cocaine or eucaine was employed, its anæsthetic effects were much more marked when the solution was as strong as four or five per cent. Weaker solutions were of little avail in most instances. A small amount of cocaine (not more than two grains for a dog) in a strong solution when injected under the skin produced local anæsthesia more effectively than the same amount in a weak solution. With regard to the question of general anæsthetics, as far as dogs and cats are concerned he thought sufficient care was not always taken, and it would be advisable to employ a capable assistant to attend to the matter of the anæsthesia of the patient. Sometimes a student was allowed to do the work, and he paid more attention to the operator and the operation than to the patient, with the result that the latter might collapse, not from want of skill on the part of the operator but through the carelessness of the anæsthetist. Mr. Hobday's process acted excellently in the case of smaller dogs and cats, but it was sometimes difficult to get the larger dogs under, and he had found it necessary in their case to employ Jonker's method of blowing in air through chloroform and charging it with a greater proportion of the material employed. Besides that, in the case of large dogs it sometimes becomes necessary to charge some of the cotton wool placed in the muzzle with either chloroform or A.C.E. mixture. As regards antiseptic agents he agreed with Professor Wooldridge in his preference for chinosol for the smaller animals, as carbolic lotions often produced toxic symptoms. With larger animals the carbolic lotion could be used with discretion. Cats—especially castrated tom cats—are very subject to distension of bladder due in some cases to the presence of urinary calculi; puncture of the bladder has often to be resorted to, but in other cases the trocar only was required. In a few instances lithotomy was necessary. With regard to the use of silk as ligature material he thought very slight objection could be taken to it even for buried sutures, or in suturing the uterus or various blood vessels passing to or from the ovaries. He was not quite certain whether Prof. Wooldridge took exception to the use of silk in laparotomy; he noticed that he had advised its use in the operation of hysterectomy, it seemed to him to be somewhat contradictory to object to it in one case and use it in another. He had not seen the operation of hysterotomy performed in a dog. It seemed to be very much more dangerous than the simpler operation of hysterectomy—because in the former the uterus is not removed but the fluids of the uterus are more likely to come into contact with the peritoneum. He had seen it more commonly employed in the pig, in cases of difficult parturition. The method adopted was to perform laparotomy upon the side wall of the abdomen, and after that make incisions in the horns of the uterus, one for each horn, removing the fœtuses in one horn by the wound in the same horn. The operation seemed to be fairly successful if done in time, indeed that might be said of any of the operations referred to.

Mr. WINTER said the paper had gone into very minute details indeed concerning the various operations touched upon. He had gone in very largerly for caponing for the benefit of his own table, and had found it to be very successful. He practised the unilateral incision, but thought the bi-lateral would be useful in many cases. He liked doing the operation as soon as the birds began to crow and show their sex; and as a rule the testicles were only about the size of an oat grain. Bad results seldom occurred with chickens, but about 20 per cent. of turkeys succumbed. The usual forceps wanted a

little alteration: its lower face should be hooked slightly because in getting the second testicle it often slipped from the forceps. As regards mammary tumours about five or six years ago he remembered removing a tumour which weighed about 1½ lbs. from a bitch whose weight was only about six pounds. The wound healed by first intention. There was no ulceration except about the lower surface, where the skin was slightly worn away rather than ulcerated from friction with the ground. He did not find strapping or bandaging of any use whatever in abdominal surgery; you could not keep your patients quiet. His favourite method was to use a clamp instead of sutures, and pins or sometimes ordinary horse nails through the skin outside the clamp. You had to sacrifice the skin. He had never yet seen one of the lower animals successfully bandaged on the abdomen. He had always been at a loss to distinguish between inguinal and scrotal hernia: he had never noticed any differences in his experience. As for antiseptics he very rarely used anything except perchloride of mercury; it was about the neatest preparation that could be used, and was about the most reliable. As for ligatures he used silk—suture silk—and it answered all practical purposes. He was not in favour of administering chloroform in any other way than neat, and admitting no air whatever. Horses came under its influence in that way in less than three minutes, and the same thing applied in the case of the dog. He preferred it also in the case of large dogs, and it should rarely cause trouble—never in the case of horses. When administering it to smaller animals, small cats and dogs, a little lard or vaseline should be rubbed over the mouth to prevent it irritating the skin

Mr. DUNLOP had listened to the paper with very great pleasure and had not much to offer in the way of criticism, as it appeared to him both clever and comprehensive. It is a long time since he had practically retired from the profession (about 16 years ago) and he was not fully in touch with its more recent developments. He remembered using antiseptics in the treatment of wounds over 40 years ago. A horse belonging to Mr. Forsyth, coal merchant, Downpatrick, had been kicked on the hip or gluteal region which caused a rather extensive lacerated wound. There was a large triangular loose flap of skin hanging with its apex downward. He dressed the wound with a weak solution of corrosive sublimate, and used pin sutures. It was surprising how rapidly the wound healed without suppuration. He injected by means of a small syringe, some of the antiseptic between the more pendent stitches. The other stitches which remained dry were left undisturbed. For large external wounds he favoured the pin suture. It is difficult to pass ordinary pins through thick skin He used large special pointed pins. He had been taught at College that castration by means of caustic clamps was bad practice, and that the caustic was unnecessary and only irritated the wound. However, he observed that those who used the caustic clamps were most successful, and the wounds remained sweet and healthy. This gave him the idea of using corrosive sublimate for wounds. At that time the antiseptic treatment of wounds was unheard of, and the germ theory was only in its infancy. Corrosive sublimate, however weak the solution, should never be introduced into a serous cavity, and he believed the practice has long since been abandoned by the medical profession. All antiseptics (where wounds cannot be treated antiseptically) are a necessary evil, and the least irritating ones, provided they are effective, should be selected. In performing neurotomy he first washed the skin with methylated spirit, made a small incision, poured into the cut a very weak solution of chloral, one fine stitch of silk was used to close the cut, a solution of gelatine and powdered camphor was brushed over the part and a gelatine plaster put on. The wound never suppurated and required no attention whatever. The gelatine was usually washed off in about 10 or 14 days. He thought inguinal and scrotal hernia were much the same—only differing in degree. He preferred the covered operation for scrotal hernia. He had often seen the omentum protrude without any untoward results. The omentum should be ligatured close up, a little antiseptic applied, and means should be taken to prevent the ligature being drawn in to the peritoneal cavity. Though laboratory experts do not report favourably, iodoform is an excellent and safe antiseptic; although, he believed, in extensive wounds where a large quantity or number of muscles are exposed, it would be poisonous. Iodorform is also useful for destroying the larger "microbes." It may be used for fleas on cats and dogs, but should be mixed with 10 or 12 parts of flour or liquorice powder. It should be applied outside—he meant outside of the house, of course. On one occasion after castration he saw the colt, or rather gelding, with the bladder fearfully distended, so much so that the bowel was completely constipated. He passed a small trocar per rectum into the bladder, close to its neck. The animal got immediate relief and was nothing the worse.

Mr. MCKENNY said he understood the essayist to have said that abdominal operations were not performed until recently; this certainly was an exaggeration of facts; no doubt formerly abdominal operations were looked upon much more seriously than they were now, and consequently were not frequently performed, and when performed were usually unsuccessful; whereas at the present time the reverse was the case; but it was not correct to state that abdominal operations were not performed many years ago, and occasionally successfully. What was the cause of the changes of opinion relative to, and the frequency and success of, abdominal operations? Some held that they were entirely due to the recent knowledge obtained from the study of bacteriology, and surgery being performed in accordance therewith (aseptic surgery). He (Mr. McKenny) objected to this sweeping assertion, and pointed out that at present, with all the up-to-date precautions strictly adhered to, when abdominal operations were delayed too long they were not successful, and he attributed the frequent failures which occurred formerly—to a considerable extent—to the fact they were delayed too long. Experience, however, had taught them that abdominal operations were not so serious as they had been considered. However, some ascribed the entire success to aseptic surgery, and indeed whenever operations were not successful the want of success was attributed to lack of aseptic precautions; but when the operations were successful, credit was given to the perfection of aseptic surgery. It seemed to be forgotten that surgeons of many years ago, when permissible, aimed at and frequently succeeded in obtaining healing by first intention of surgical wounds. Of course their views of cleanliness, dexterity, and sharp clean instruments were not those of a bacteriologist, yet then and now mercurial preparations were and are extensively used in connection with operations; and although disinfectants were then used from a chemist's view, and now from a knowledge of bacteria, yet they were and are used, and no doubt with similar results; and whether the chemist or bacteriologist was correct, one thing was certain, viz., that the former was stable and the latter vacillating in his views. It would be remembered that Prof. Wooldridge told them of a dog that had a serious abdominal operation (laparotomy) performed on it in the Camden Town College, and the same evening escaped and was not found for some days, and probably was going about the streets in the interval, and at last found its way into the Dogs' Home, and was taken back to the College and made a good recovery. From the time of its escape until it was recovered, the antiseptic treatment was grossly neglected, and yet they were informed it made

a good recovery. But this was not a single case; he (Mr. McKenny) could tell them of a great many; he would relate a few. A boy eleven years of age fell from a window on to the dirty spikes of an area railing and was impaled upon them; the boy remained struggling on the railing for at least five minutes before he was released, he was taken to a hospital, and made a rapid and good recovery. Again, when he (Mr. McKenny) was at college he got into a serious row from being too fond of experimental surgery. One case was as follows. He had never seen ovariotomy performed, and asked one of the professors (who professed to be an expert at it) to operate on a terrier bitch; the professor consented, and made an incision in the left flank, put one of his fingers into the wound and groped about in it for fully half-an-hour without accomplishing the desired object; fortunately the professor was then called away, and he (Mr. McKenny) considerably dilated the orifice, in fact he made it large enough to permit the removal of the loose abdominal organs, which he unceremoniously and without any aseptic precautions left on the dissecting room table, which had some fascia and decomposed tissue on it; he thoroughly satisfied himself as to the exact position of the ovaries, roughly replaced the viscera, stitched up the wound, turned over the bitch and made a fresh incision on the off flank, removed the ovaries, stitched up the wound, and kept the animal alive, expecting to have the opportunity of studying pyæmia; but to his astonishment, the animal made a good recovery. He did not for a moment wish it to be understood that he approved of dirty surgery, on the contrary he highly approved of cleanliness in all things, but he was clearly of the opinion that aseptic surgery did not play the part that most people attributed to it. A good deal had been said by the essayist as to the stitching of wounds; some may have thought that he (the essayist) laid too much stress on the subject, but in his (Mr. McKenny's) opinion the success or non-success of the healing process of a wound greatly depended on the manner in which it was brought together and retained in position, in fact without the application of any antiseptic, a clean, fresh incised wound when brought neatly together, and the blood allowed to remain on it, healed without much blemish, indeed sometimes by first intention, leaving so slight a scar that it could only be discerned with difficulty. Bye-the-bye, he would ask for an explanation as to why disinfectants were not required in caponising cocks. In reference to the advisable precautions to be taken in using anæsthetics with dogs, he quite agreed that it was necessary to have an antidote ready for administration; for although Professor Hobday in some of the communications he submitted to the profession stated that the administration of chloroform to dogs was not dangerous, yet in others he had told them of the great number of cases which would have died were it not for the timely administration of hydrocyanic acid. He (Mr. McKenny) understood Mr. Magee to have said that dogs did not interfere with surgical wounds when such were performed under strictly aseptic conditions; in this he (Mr. Magee) was only repeating what Prof. Hobday had written, but the latter states he covers the parts with collodion. Mr. McKenny attributed the fact of not interfering with surgical wounds not to aseptic surgery, but to the state of the animal, and its wonderful instinct of self-preservation; and in explanation of this he said that if a healthy dog, cat, or monkey was besmeared with collodion it would as quickly as possible take it off, unless it got a good beating, and when the nervous shock of the latter was overcome, one of the first symptoms of recovery would be the notice taken of the matted hair which they would proceed to lick, bite, or scratch off. Eversion of the rectum in dogs was sometimes most troublesome to retain in position. Many years ago a valuable pug was brought to him, suffering from prolapsus ani: he found no difficulty in returning the everted portion of the rectum, but could not retain it in position to his satisfaction; however, he performed tracheotomy on the dog so that when it closed the glottis and strained to force out the rectum, the diaphragm could not be fixed, as air escaped through the artificial tracheal orifice. The treatment succeeded, and since that he (Mr. McKenny) had successfully repeated the operation for the purpose.

Mr. McKenny concluded by stating that he did not consider the operation of puncturing the bladder was frequently required; he had found in all cases of retention of urine, other than from urethral calculi, that by placing the forefinger in the rectum, and holding the animal with the other hand on the posterior portion of the abdomen, so that when the hand on one side, and the finger on the other side of the bladder were gently but firmly pressed together, the urine would pass out; however, usually this operation required to be repeated. In conclusion, he wished to thank Prof. Wooldridge for the interesting paper which he had submitted.

Mr. HEDLEY would like to ask Prof. Wooldridge whether he had ever removed prostatic glands from any of the smaller animals, and if so with what success?

Prof. O'CONNOR said that he also wished to add his share of praise to Prof. Wooldridge for his excellent paper, and that he would recommend any person requiring information on abdominal surgery in the smaller animals to peruse it carefully. He thought it very necessary that a competent person should have charge of the administration of the anæsthetic to the patient, otherwise unpleasant results might follow. Prof. Wooldridge did not refer to the possible necessity of maintaining the body temperature of the subject under operation. He thought it might occasionally be advisable to have hot water bottles placed alongside the patient during a prolonged operation on the abdominal viscera. As regards suture material he did not think that silk became so rapidly absorbed. Recently he performed the radical operation for umbilical hernia in a thoroughbred colt, when he used strong double silk sutures to bring the muscular edges of the ring together. A clam was applied to the skin and came away on the 7th day. The wound did well afterwards, but at the end of the fourth week there was still a point where the edges of the skin did not unite, and he found this to be due to two of the five sutures inserted in the abdominal wall becoming exposed. With some difficulty they were removed and it was found that the silk had undergone no alteration, showed no signs of undergoing absorption. Therefore he considered it quite reliable as an abdominal suture. At present they had a case at the College which served as a good demonstration of the use of asepsis and antisepsis. Neurectomy was performed on the off fore limb of a horse and in spite of cocaine being used he struggled a great deal during the operation, so that the aseptic and antiseptic precautions were interfered with, dust got into the wounds which afterwards suppurated, and took three weeks to heal. The same operation was then performed on the near fore leg, and during it the horse remained perfectly quiet, not a particle of dust getting into the wounds, the result being that they healed by first intention, *i.e.*, within three days. He would not refer further to the paper except to say that it was beyond criticism, being practically perfect in detail.

Colonel STEEL hoped he would be allowed to make his small contribution to the discussion, and it was with reference to the remarks on caponing. He was particularly well qualified because he had never seen a bird caponised in his life, but many years ago he had known a man in Essex who was a very successful operator, and in describing the operation told him that he introduced his finger—not saying at what particular part—and crushed the testicles against the bone—he presumed the

pubis—causing the breaking down of the structure and subsequent absorption. It was a very similar thing to the mulling of cattle as practised by natives of India.

Mr. NORRIS wished to ask the essayist if he had had any experience of spaying pigs, it was an operation that as a rule veterinary surgeons knew very little about. He had heard very vivid descriptions of the operation as performed by local men, and certainly their methods would shock the aseptic conscience of Prof. Wooldridge and his colleagues. He agreed with Mr. McKenny from a practical point of view, that perfect asepsis was almost an impossibility, then things were not what they were said to be in theory. He would like to ask Prof. Wooldridge for some details in connection with ovariotomy in the pig, whether he should make two incisions or one, whether he would remove the uterus altogether or each ovary separately, and what position he would hold the patient in. The paper was a very full and detailed account of a very interesting subject.

Professor WOOLDRIDGE thanked them very much for the manner in which his paper had been received. He could not give the last speaker, Mr. Norris, any information on his question as he had no experience of spaying pigs. He, like other speakers, seemed to forget the differences in the animals in the liability to peritonitis. The horse appeared to be very susceptible, perhaps the most so of the domesticated animals. The pig, on the other hand, was probably the least susceptible, evidence in this direction being afforded by the low death rate in pigs spayed by the old gelders, even without attention being paid to ordinary rules of cleanliness. Such liberties could not be taken with the horse or dog with impunity. Mr. Norris suggested that it was unnecessary to take such precautions against organisms, as asepsis was impossible. Well, since asepsis was almost an impossibility, this gave rise for the necessity for antiseptic precautions, and the sole object of using such agents as carbolic acid or chinosol was to destroy any organisms that had gained access to the wound. Mr. McKenny had apparently not grasped the point he was trying to make in quoting the case of the Dalmatian dog, namely, the efficacy of sealing with collodion if the wound be germ free and not too large. In that case thorough antiseptic precautions had been adopted during the operation, the wound was hermetically sealed with iodoform and collodion, and the seal was intact when the dog was brought back. If wounds are extensive there will be extravasation and probably necrosed tissue, elements which nature throws off in the direction of least resistance, viz., through the lips of the wound. Liquid is almost certain to ooze, and so hermatical seal-sealing is not indicated. On the other hand, in the case of smaller operation wounds, there was little or no discharge if the wound was aseptic because a minimum of tissue was destroyed. Mr. Magee had called his attention to his omission to refer to examination of the patient's heart before the administration of chloroform. Well, he had taken it for granted the operations he described had already been decided upon, and he did not refer at all to the preliminary circumstances. He was glad to find that Prof. Craig agreed. As regards the strength of cocaine used, it was generally advised in text books to use a 2 per cent. solution, but he strongly advised a 4 or 5 per cent. solution, regarding 2 grs. as a maximum dose for a dog. Better results were obtained by employing half the quantity of the more concentrated solution. Supposing he used both cocaine and eucaine, he took one grain of each in 40-50 m.m. of clean water. The cocaine was the more rapid, and the effects of the eucaine more protracted. The former took about three minutes to act and lasted about twenty minutes, the latter lasted about an hour so that it was more useful in prolonged operations. With regard to general anæsthesia, Hobday's plan was to *draw* air over chloroform instead of driving it. This results in a weaker impregnation of the air with chloroform vapour and is very successful with the smaller dogs. Junker's method of driving air through chloroform was better for larger dogs. There appeared to be some misunderstanding with regard to the ligature materials, and Prof. Craig had pointed out what he thought was an apparent contradiction. He (Prof. Wooldridge) had not in any case recommended catgut for ligatures. He found it difficult to get it tight enough, so that it was liable to slip. He always preferred silk for ligatures. Where he did recommend and use catgut was for buried sutures. If Prof. O'Connor understood him to say that silk did not persist in buried sutures as long as catgut, that was not what he intended to convey. Catgut did not tend so much to cause local irritation in a buried suture as silk and so interfered less with the healing process. Silkworm gut persisted longer than either silk or catgut. He quoted the case of a cat at the Royal Veterinary College, London, in which the buried sutures of silkworm gut inserted in the abdominal muscles after ovariotomy, were still easily felt several years later. He agreed with Mr. Winter that some modification was necessary in the forceps generally used for caponing. In large cockerels the testes could only with difficulty be grasped with the usual instrument, which generally slipped several times, and then in trying to prevent this the gland got crushed and had to be removed in pieces. But as Colonel Steel had said, the same result was obtained provided the blood supply was cut off. The question of difference between scrotal and inguinal hernia was raised by Mr. Winter. In Prof. Wooldridge's opinion the distinction depended upon sex mainly. The orifice through which the herniated organ passed was the same in each case, viz., inguinal canal. In inguinal hernia the offending organ was generally uterus, and of course scrotal hernia could only occur in males. However, the difference was really artificial. He thought Mr. Dunlop was right in saying that disinfectants should not be used too strong. Their only object was to destroy any adventitious organism which might gain access, and everything beyond that had an ill effect in debilitating the tissues and retarding healing. Mr. McKenny's case of ovariotomy in the dog could only be regarded as a remarkable triumph of nature over science. With reference to Mr. Hedley's question —he had not removed any prostates in dog patients, but did not think it would present much difficulty. He would suggest it would be easiest done by laparotomy, making an incision just immediately in front of the pubis, and the prostate snared or enucleated with the finger. Castration usually had the desired effect of relieving symptoms caused by enlarged prostate, by bringing about atrophy of the gland. He did not think even in prolonged operations it was necessary to apply external heat to the body unless there was extensive hæmorrhage. Of course if the viscera had to be removed from the peritoneal cavity they should be placed on a warm pad and kept as warm as possible. In operating upon dogs he did not usually employ any chemical disinfectant for his instruments. He simply boiled them and placed them on a perforated tray to be taken off as required. Cotton wool for sponging he boiled and then soaked in antiseptic. If a disinfectant were considered advisable for instruments he would employ carbolic acid. He thought something more might have been said on the question of iodoform, as there appeared to be some doubt as to its actual efficacy. It had only been proved of real service as a germicide in solution with ether and alcohol —one part of iodoform, two parts of ether, and eight parts of alcohol. Round operation wounds it acted as a local sedative and antiseptic, preventing organisms propagating into the wound from the surrounding regions.

Mr. HEDLEY proposed, and Mr. Dunlop seconded, a vote of thanks to the essayist, which Prof. Wooldridge suitably acknowledged.

DISEASES OF ANIMALS ACTS 1894 TO 1903.

SUMMARY OF RETURNS, WEEK ENDING JUNE 18, 1904.

Period.		Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Swine Fever.	
		Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks.	Slaughtered *
Week ended June 18, 1904		13	19	..	..	34	48	..	..	34	83
Corresponding week in	1903 ..	17	26	..		31	54	..	..	57	353
	1902 ..	12	13	..	..	24	30	..	..	33	150
	1901 ..	17	24	..		27	43	..	..	109	503
Total for 25 weeks, 1904		517	807	..	..	725	1,321	..	..	752	3695
Corresponding period in	1903 ..	416	649	..	..	655	1078	..	..	840	3695
	1902 ..	370	612	1	120	538	993	12	2	836	3984
	1901 ..	346	494	12	669	621	1080	1	1	2011	9723

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection.

Board of Agriculture and Fisheries, June 21st, 1904.

VICTORIA VETERINARY BENEVOLENT FUND.

CASH STATEMENT EROM APRIL 1ST, 1903, TO MARCH 31ST, 1904.

W. F. BARRETT, Hon. Treasurer, in account with the Victoria Veterinary Benevolent Fund.

RECEIPTS.

Balance at bank ...	£116 19 10		
do. in hand ...	1 1 0		
		118	0 10
Interest on investments :			
Consols	29 16 2		
Norwich Corporation Stock	15 14 10		
		45	11 0
Subscriptions		116	10 0
Donations		17	12 0
		£297	13 10
Investments :—			
Consols at cost ...	1202 4 7		
Norwich Corporation Stock at cost ...	532 3 6		
	£1734 8 1		

PAYMENTS.

Relief	£129 0 0
Printing, postages, and sundries ...	10 13 1
Balance at Bankers	158 0 9
	£297 13 10

Particulars of relief during year ending March 31, 1904.

Mrs. H.	1 0 0	Mrs. F.	12 0 0
Mr. H.	3 0 0	Mrs. H.	12 0 0
Mrs. C.	2 0 0	Mrs. B.	12 0 0
Mr. C.	4 0 0	Mrs. R.	11 0 0
Mrs. D.	5 0 0	Mr. B.	12 0 0
Mrs. F.	6 0 0	Mrs. B.	12 0 0
Mrs. F.	12 0 0	Mrs. D.	12 0 0
Mrs. W.	13 0 0		
		£129	0 0

We certify that we have examined the above accounts and in our opinion they are correct.

(Signed) GEORGE WARTNABY, JOSEPH WOODGER, *Hon. Auditors.*

POINTS OF THE HORSE.

This is the third edition of this fine work. The first was unequalled on the subject by any book in our language, the second was an improvement on the first, and this leaves the second far behind in matter, and size, and form. The illustrations were plentiful in former editions, this contains nearly 300 more.

We know no other man who could have written such a book. Captain Hayes possesses just that combination of knowledge—practical and scientific—which is essential to do justice to his subject. The usual descriptions of points of a horse are so vague and empirical that they convey very little to a reader. Even one horseman talking to another rarely describes a horse so that a clear conception of the animal is gained by his listener. A neat head, a good shoulder, first class legs and feet are expressions conveying very different ideas to different persons.

In this book the descriptions are clear, and the why and the wherefore are given. Every part is described with scientific exactness and illustrated by photographs which enable comparison to be made between one conformation and another. The author seems to have tested and verified his opinions by exchange of ideas with all sorts of authorities and then to have compared and retested them with his own cosmopolitan experience.

For those who have not seen the book we may state the plan followed. There are 38 chapters commencing with one on the Principles of Conformation in Animals. Then the external parts (the points) are named and defined. The anatomical structures are next treated of. These preliminary chapters are followed by a consideration of the Distribution of Weight in the horse's body, and the Mechanism of Equine Locomotion. The formation and comparison of "points" are discussed in four or five chapters, and these are followed by sections on Skin, Colour, and Hair, Action and cleverness, Condition and good looks, Weight carrying and staying power, Blood, Symmetry and compensations. A very interesting chapter is that on the Special points of various classes of horses. Quite a number of chapters are devoted to the various breeds of horses—home and foreign—not forgetting their fossil ancestors.

It is impossible to select any passages for special quotation, though there are many which would make interesting and instructive extracts. The illustrations are simply splendid. Every kind of horse in the world

is to be seen in the pages of this book—not drawn but photographed.

These photographs must have taken an enormous amount of time and labour to collect. They illustrate the text throughout, and make clear the difficult and technical comparison of good and bad points. Photographs of heads, legs, hocks, etc. of various kinds make an impression on the reader perhaps even more clear than the best descriptions. The photographs of horses and other animals in motion are also a wonderful collection.

In short, the work is one by itself—filling a place that no other book or books can fill and being indispensable to everyone desiring a full and correct knowledge of the points of the horse. It is published by Messrs. Hurst and Blackett, who have every right to feel as proud of their share in the production as must the author.

Nocard Memorial Fund.

Sir,

Will you kindly allow me to state that I have to-day sent off to Prof. Vallée a cheque for £17 10s. subscriptions received from the undermentioned gentlemen to the Nocard Memorial Fund.

Sir H. Plunkett, K.C.V.O.	Mr. A. Over
Col. Glover, C.B. (the late)	J. V. Daly
Lt.-Col. Blenkinsop, D.S.O.	W. C. Patrick
Prof. G. H. Wooldridge	J. F. Healy
J. F. Craig	J. McKenny
G. Dunne	T. D. Lambert, Sen.
J. J. O'Connor	P. J. Howard
Mr. L. Savournin	F. C. Mason
J. J. Kelly	

—and yours faithfully,

A. E. METTAM.

Dublin, June 20th.

Personal.

MASON—BEVAN.—On the 15th June, at the Parish Church, Farnham, by the Rev. George Gage Gardner, M.A., rector, Harold Edward Trestrail Mason, M.R.C.V.S., of Bishop's Stortford, son of Richard Mason, Elmer House, Farnham, to Winifred Mary, second daughter of the late John James Bevan, Farnham.

A very pretty wedding was solemnised in the Parish Church of Louth on Tuesday afternoon, June 21st, between Mr. J. Brodie Gresswell, F.R.C.V.S., of Louth, and Miss Elsa Attschul, third daughter of D. Attschul, Esq., and Mrs. Attschul, of Pilsen, Austria. The ceremony was performed by the rector, the Rev. Canon Wilde. The bride, who looked charming, entered the church on the arm of Dr. Albert Gresswell, who gave her away. There were four bridesmaids, and Dr. George Gresswell, of Grimsby, acted as best man for his brother. The reception was held at Kelsey House by Dr. Albert and Miss E. Gresswell. Amongst the guests present were the Mayor and Mayoress of Louth (Councillor and Mrs. Thompson) and many friends from Louth and Grimsby.

ARMY VETERINARY DEPARTMENT.

Extract from *London Gazette*,

WAR OFFICE, PALL MALL, June 17.

IMPERIAL YEOMANRY.

FIFESHIRE AND FORFARSHIRE.—A. Spreull, gent., to be Vet.-Lieutenant.

NORTH OF IRELAND.—J. M. Magill, Esq., to be Vet.-Captain.

Annual Dinner A.V.D.

The Annual Dinner of the Army Veterinary Department took place at the Carlton Hotel, Pall Mall, on the 17th instant. Present: Major-General H. Thomson, C.B. (in the chair); Colonels F. Duck, C.B., J. C. Dwyer, W. B. Walters, C.B.; Lieut.-Colonels L. J. Blenkinsop, D.S.O., F. W. Forsdyke, T. A. Killick, J. A. Nunn, C.I.E., D.S.O., G. A. Oliphant, J. Reilly, R. Rowe, C. Rutherford, C.M.G.; Majors A. F. Appleton, E. R. C. Butler, G. C. O. Fowler, J. K. Grainger, T. Marriott, J. Moore, E. Taylor; Captains F. S. H. Baldrey, A. England, P. J. Harris, H. M. Lennox-Conyngham, E. E. Martin, W. M. Millar, A. N. Mason, W. A. McDougall, W. A. Pallin, W. D. Smith, F. C. Stratton, W. J. Tatam, G. K. Walker, F. W. Wilson, W. N. Wright, W. B. Edwards; Lieutenants E. P. Argyle, G. A. Dibben, H. J. Holness, D. Macdonald, T. A. Nicholas, F. C. O'Rorke, A. J. Thompson, R. C. Fenton, and P. V. Beatty. Guests: Professor W. O. Williams, and Mr. J. F. Simpson.

Great Eastern Railway Company's Tourist Guide to the Continent is a handy 8vo. guide book of 160 pages, with an illustration on most of them, street maps of Amsterdam and Brussels, and others, and an index. It contains a quantity of information, some of which is recently added—New tours in the Tyrol, in North Germany, and in Norway, Denmark, and Sweden, *via* the Royal Mail, Harwich—Hook of Holland Route; of tours in the Luther Country, and Thuringian and Hartz Mountains; and a chapter giving particulars of the cost of Continental travel. The price is sixpence.

Official List of Hotels, Boarding Houses, Seaside, and Farmhouse Apartments, London and South Western Railway Co.—Contains over 70 pages of illustrated notes of places from Twickenham Ferry to Lulworth Cove, and including Isle of Wight, Jersey and Guernsey. Nearly 40 pages of list of apartments, many illustrations, and pages of advertisements of hotels, golf links, excursions, etc., etc.

Quiet Holiday and Seaside Resorts in Normandy and Britany, L. & S.W.R. Co.—A small handbook intended to indicate rather than describe. It gives the position of places, size, how to get there, cost of travelling, hotels, pensions, etc., with an index, and numerous local advertisements.

CORRESPONDENCE.

PIROPLASMA BOVIS.

Sir,

In *The Veterinary Record* of the 18th inst, I read with interest Mr. R. E. Montgomery's article on the occurrence of Piroplasma Bovis. However, it is to the concluding statement of his contribution that I wish to draw attention, viz., " . . . the *sole* object of the note being to call attention to the fact that piroplasma bovis is present in this country." As the latter would suggest that the writer wishes to claim priority for its demonstration, I would like to point out that in at least two of the colleges it has been customary for several years to teach that "Redwater" in the British Isles is due to the Pirosoma Bigeminum. Various writers in *The Veterinary Record* have pointed out that "Texas fever" and "Redwater" are identical or closely allied, both being transmitted by ticks or culicidæ.

Translator's notes on "Bov. Malaria, by Guglielmi." Vol. xiv., No. 684, 1901. Mason: Vol. xiv., No. 686, 1901. Place: Vol. xiv., No. 700, 1901. Harvey: Vol. xiv., No. 727, 1901. Thorburn: Vol. xv., No. 742, 1902.

In August, 1901, Mason announced that Prof. Mettam had demonstrated the presence of the parasite in various cases. In 1902 the late Mr. Warwick, M.R.C.V.S., demonstrated its presence in Cumberland. Later in 1902 (Sept.) in the note to which Mr. Montgomery referred in his article, Mr. Thorburn states that Professor Mettam examined blood films made by the former's assistant, Mr. Montgomery, who was still a student, and reported that the parasites were present in various stages of development. I think these references should suffice to show Mr. Montgomery that "the fact that piroplasma bovis is present in this country" is already well known.

R.V. Coll., Dublin. GEO. H. WOOLDRIDGE.

COMMUNICATIONS, BOOKS AND PAPERS RECEIVED.—Messrs. T. Wilkinson, John Renfrew, C. B. Maugham, F. Tonar, W. F. Widden. Prof. Mettam, Prof. Wooldridge, G. M., "The Doctor Sahib."

"*Veterinary Pathology*," Friedberger & Fröhner, Trans. by Capt. M. H. Hayes. *Epizootic Lymphangitis*, by Capt. W. A. Pallin, *The Glasgow Citizen*, *Western Morning News*, *Southampton Times*, *The Devon & Exeter Gazette*.

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